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DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2017-18/CA **Date: 10-01-2018**

1. TESTING OF COARSE AGGREGATES (20mm):

Sub: Testing of Aggregates 20mm.

{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 05-01-2018

Sample supplied to lab by: M/s.KRIDL, Bangalore

Report required for : Assistant Executive Engineer
Projects, Yelahanka Zone,
BBMP, Bangalore.

Technical Reference: IS 2386 and IS 383-1970 (Reaffirmed on 2007)

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	20 mm Sample	Single size	Graded
40 mm	100.00	100.00	100.00
20 mm	97.60	85-100	95 - 100
10 mm	48.50	0 - 20	25 - 55
4.75 mm	Nil	0 - 5	0 - 10

TABLE 1. 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Tests Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1	Flakiness Index	As above	13.20 %	Not to exceed 25 %
2	Crushing value	----,,----	25.80%	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

Asst. Executive Engineer
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Yelahanka Zone
Bangalore

*As Furnished by Client.

The Results relate only to the items tested

10/01/2018

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BUB/CTE/2017-18/CA **Date: 10-01-2018**

1. TESTING OF COARSE AGGREGATES (40mm):

Sub: Testing of Aggregates 40mm.

{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 05-01-2018

Sample supplied to lab by: M/s.KRIDL, Bangalore

Report required for : Assistant Executive Engineer
Projects, Yelahanka Zone,
BBMP, Bangalore.

Technical Reference: IS 2386 and IS 383-1970 (Reaffirmed on 2007)

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	*Single size*	*Graded*
40mm	96.80	85-100	95 – 100
20mm	45.20	0 -20	30- 70
10mm	23.10	0 -5	10- 35
4.75mm	Nil	------	0 - 5

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2007)
1.	Flakiness Index	As above	14.70 %	Not to exceed 25 %
2.	Crushing value	----,,----	26.30%	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

Asst. Executive Engineer
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*As Furnished by Client.

The Results relate only to the items tested.

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BUB/CTE/2017-18/MS **Date: 10-01-2018**

1. TESTING OF FINE AGGREGATES (ROBO SAND):

Sub: Testing of Robo Sand/M.Sand.
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 05-01-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
Projects, Yelahanka Zone,
BBMP, Bangalore.
Technical Reference: IS 2386 and IS 383-1970 (Reaffirmed on 2007)

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	**Percentage Passing**	Specification as Per IS: 383-1970(Reaffirmed 2007) **Percentage Passing**				Remarks
		Zone-I	**Zone-II**	**Zone -III**	**Zone -IV**	
10.00	**100.00**	100	100	100	100	The Sample Conforms to Grading **Zone-II**
04.75	**96.30**	90-100	90-100	90-100	95-100	
02.36	**88.10**	60-95	75-100	85-100	95-100	
01.18	**75.60**	30-70	55-90	75-100	90-100	
600. mic	**44.00**	15-34	35-59	60-79	80-100	
300.mic	**23.60**	5-20	8-30	12-40	15-50	
150.mic	**8.20**	0-10	0-10	0-10	0-15	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2007)
1	Specific Gravity	001	**2.61**	----------

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BUB/CTE/2017-18/Cement **Date: 10-01-2018**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 01-01-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
Projects, Yelahanka Zone,
BBMP, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla Super
Grade * : 53
Type * : OPC
Date : 02-01-2018 to 09-01-2018

SL No	Name of Test	Results	Requirements as per
		Cement Sample	IS 12269-1987
1	Initial setting time	**145 min**	Shall not be less than 30 min
2	Final setting time	**260 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.60%**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.40 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results) b) 7 days (average of three results)	**28.70 N/ Sq mm** **42.20 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

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The Results relate only to the items tested

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BUB/CTE/2017-18/SS **Date: 10-01-2018**

1. TESTING OF STONE SAMPLE :

Sub: Testing of Size stone.
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 01-01-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
Projects, Yelahanka Zone,
BBMP, Bangalore.

Type of Stone : Granite

TABLE 1.1 :

SL No	Details of Tests	Observed Value	Normal Values
01	Compressive Strength	**1326.00** Kg/ Sqcm	Not less than 1000.00 Kg/Sqcm
02	Water absorption,%	**0.34 %**	Not more than 2.0 %

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BUB/CTE/2017-18/KS **Date: 23-01-2018**

TEST REPORT

Sub: Testing of Pre-cast Material-Kerb stones.
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}
Ref: Letter No.Testing/BUB/2017-18, dated 20-01-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
Projects, Yelahanka Zone,
BBMP, Bangalore.

1.PHYSICAL TESTS ON KERB STONES :

Sl No.	Details	Flexural strength, fcr in N/sqmm	Characteristic Compressive Strength, fck in N/sqmm	Avg. Characteristic. Compressive Strength fck in N/sqmm	Remarks
1	Kerb Stone	3.30	22.22	21.99	As per Cl. 6.2.2 of IS 456- 2000, fcr=0.7√ fck
2	"	3.25	21.55		
3	"	3.30	22.22		

*As Furnished by client.
The Results relate only to the items tested

23/01/2018

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BUB/CTE/2017-18/P-

Date: 23-01-2018

TEST REPORT

Sub: Testing of Grey Colour Pre-cast Paver Blocks-**80 mm thick**.

{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 20-01-2018

Sample supplied to lab by: M/s.KRIDL, Bangalore

Report required for : Assistant Executive Engineer
Projects, Yelahanka Zone,
BBMP, Bangalore.

Colour : Grey, Shape: I-Section

PHYSICAL TESTS ON PRECAST PAVER BLOCKS

1.COMPRESSIVE STRENGTH:

Sl No	Identification	Cross sectional area, mm^2	Compressive strength N/mm^2	Average Compressive Strength, N/mm^2
1	001	31,870	36.40	36.40
2	002	,,	35.60	
3	003	,,	37.20	

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BUB/CTE/2017-18/Tiles

Date: 23-01-2018

TEST REPORT

Sub: Testing of Pre-cast Cement Concrete Designer Tiles. (300x300mm)
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 20-01-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
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BBMP, Bangalore.
Technical Reference: IS 1237-1980 & IS15658-2006

PHYSICAL TEST ON PRE CAST CEMENT CONCRETE TILES

I, WET TRANSVERSE STRENGTH TEST:

SL NO	Identification	Wet Transverse Strength(N/sq.mm)	Avg. Value Wet Transverse. Strength	Requirement as per IS:1237-1980 (Reaffirmed 1990)
1	001	5.60	**5.71 N / sq.mm**	The average wet transverse strengthr should not be less than 3.0 N/sq.mm
2	002	5.75		
3	003	5.80		

* As Furnished by Client
The Results relate only to the items tested

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Date: 06-02-2018

BUB/CTE/2017-18/Cube

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 07 days Compressive Strength
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 05-02-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
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BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M-10 (PCC)

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	29-01-18	05-02-18	07	22500	180	8.00	**8.00**
	002	"	"	"	"	175	7.78	
	003	"	"	"	"	185	8.22	

As furnished by Client.
The Results relate only to the items tested.

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BUB/CTE/2017-18/Cube **Date: 27-02-2018**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 28 days Compressive Strength
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 26-02-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
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BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M-10 (PCC)

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	29-01-18	26-02-18	28	22500	275	12.22	**12.15**
	002	"	"	"	"	260	11.56	
	003	"	"	"	"	285	12.67	

* As furnished by Client.
The Results relate only to the items tested.

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BUB/CTE/2017-18/Cube

Date: 09-02-2018

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 07 days Compressive Strength
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 08-02-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
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BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M-15

Location* : Coping Concrete

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	01-02-18	08-02-18	07	22500	300	13.33	**13.19**
	002	"	"	"	"	290	12.89	
	003	"	"	"	"	300	13.33	

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BUB/CTE/2017-18/Cube **Date: 02-03-2018**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 28 days Compressive Strength
{Project*: Improvements to Park at Bhuvaneshwarinagar, MCECHS Layout, MS Ramaiah North City & Shabarinagar in Ward No.06, Thanisandra}

Ref: Letter No.Testing/BUB/2017-18, dated 01-03-2018
Sample supplied to lab by: M/s.KRIDL, Bangalore
Report required for : Assistant Executive Engineer
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RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M-15

Location* : Coping Concrete

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	01-02-18	01-03-18	28	22500	400	17.78	**17.56**
	002	"	"	"	"	385	17.11	
	003	"	"	"	"	400	17.78	

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